

**REMARKS**

Claims 1-16 are all the claims pending in the application.

Initially, it is noted that the Examiner has acknowledged a claim of priority for Applicants under 35 U.S.C. §119. However, priority has not been claimed in the present application, as this application is a National Stage Entry which does not claim priority from an earlier foreign application.

**I. Rejection of Claims 1-16 under 35 U.S.C. § 103(a)**

On pages 2-4 of the Office Action, the Examiner rejects claims 1-16 under 35 U.S.C. § 103(a) as being unpatentable over Saito et al. (U.S. Patent 5,858,479).

Applicants respectfully respond as follows.

The present invention is directed to an electrode for electric discharge surface treatment comprising a compressed mixture of at least a powder of metal carbide and a powder of a hydrogen desorbed metal hydride (claims 1 and 7). The present invention is also directed to a method of making the electrode of the present invention (claim 4). In addition, the present invention is directed to a method of discharge surface treating using the electrode of the present invention (claim 10).

An object of the present invention is to provide an electrode including small metal particles. The electrode is manufactured by mixing a hard material, such as TiC whose small particles can be easily obtained, and a hydride, which is subsequently hydrogen desorbed. In this way, the final electrode product is not composed of a metal hydride whose small particles cannot be easily obtained. According to the invention, after mixing the constituent materials, hydrogen is ejected out (desorbed) by heating to thereby manufacture the electrode including small metal particles.

Saito relates to an electrode for electric discharge surface treatment and a method thereof. Saito discloses an electrode which in its final form contains  $\text{TiH}_2$ . The hydride form is explicitly maintained in the electrode in order to obtain an "oxide cleaning effect" when the hydride dissociates during electrical discharge. See column 5, lines 43 – 51.

In contrast, in the present invention, hydride does not remain in the electrode, i.e., all claims of the application are explicitly directed to an electrode which is hydrogen-desorbed before use. Although a metal hydride is used as one of the starting materials of the electrode of the present invention, due to heating, hydrogen is ejected out of the electrode prior to the completion of electrode manufacture. Thus, the present invention, which envisions the *final* electrode product as opposed to some intermediate, does not contain hydride.

Accordingly, the electrode of the present invention differs from the electrode of Saito in the final chemical form of the electrode product. This difference is even more explicit when considering the claims drawn to the manufacturing process, where the process of desorbing hydrogen is one of the particularly claimed manufacturing steps.

In view of the above, Applicants respectfully submit that Saito does not teach or suggest the present invention. Therefore, withdrawal of the foregoing rejection is respectfully requested.

## II. Conclusion

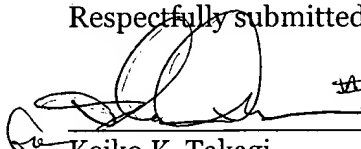
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

**RESPONSE UNDER 37 C.F.R. § 1.111**  
**U.S. Application No. 09/787,359**

**Attorney Docket: Q63491**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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